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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Administration
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EXPORT PACKAGING SPECIFICATIONS

These specifications supersede those contained in FSC 1539-C, FSC-1742, FSC-1742-A, and FSC-10 and supplements. All vendors shall use these types of boxes as rapidly as existing stocks on hand or under contract are exhausted.

Canned Foods may be packed in the following types of cases: Solid Fibre, Types A, A-1 and A-2; Wirebound Wood, Types B-0, B-1, B-2 and B-3; Nailed Wood, Types C-1, C-2 and C-3. Products other than canned products may be packed in any one type unless a certain type is stipulated in the announcement.

TYPE A - SOLID FIBRE BOXES

Application - This specification may be used for the packing of canned goods. The weight of contents is not to exceed 65 lbs.

Style of Box - Solid fibre boxes, to be in accordance with this specification, must be made in a special two-piece construction consisting of a Regular Slotted Box made with a stitched body joint, and an outer sleeve. The sleeve is to be made of a single piece of fibreboard stitched to form a sleeve or tube, which closely fits the box, covering the top and bottom flaps of the box, and both ends. The stitching flap of this sleeve is to be located so that it overlies part of one end of the box. The length of the sleeve, measured parallel to its stitched joint, is to be the same as the inside width of the box.

Material - The box and the outer sleeve shall be made of solid fibreboard having a minimum thickness of .100". Under normal atmospheric conditions (50 to 70% relative humidity) the minimum average Mullen test must be 750 lbs., and immediately after 24 hours immersion in water at 70° to 80° F., the minimum average Mullen test must be 500 lbs. There must be no separation of the plies of the board beyond 1/4" from the edges of the sheet after 24 hours immersion in water.

Closure - The flaps of the inner box are to be sealed by means of a water-resistant adhesive over all areas of contact between the flaps, by metal stitching, or by a combination of these methods. The sealed box is then slipped into the outer sleeve and strapped with one curved, flat or round metal

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band, having a minimum joint breaking strength of 290 lbs., placed girthwise around the box at the middle of the length.

Performance

- Tests - Boxes packed with their contents must meet the following tests: Immediately after 24 hours immersion in water at a temperature of 70° to 80°, boxes must be able to successfully withstand 12 drops from a height of 30 inches onto a concrete or stone surface in such fashion that the box strikes diagonally on a corner. One drop is to be made on each of the 8 corners consecutively until a total of 12 drops is attained. The opening of one box edge, full length, or spilling of the contents, is to be considered failure of the box to meet this specification.

In addition to the Consolidated Freight Classification stamp, the manufacturer must print on a side panel of the box in letters 3/16" high a statement of compliance with this specification.

TYPE A-1 - WEATHERPROOF SOLID FIBRE AND (OR) WEATHERPROOF CORRUGATED FIBRE BOXES

This specification may be used for the packing of subsistence items wherein the weight of the contents does not exceed 65 pounds.

- Style of Box - These solid fibre boxes and corrugated fibre boxes must be of regular slotted style construction with a stitched body joint. The boxes shall be made of solid fibreboard .090 or all kraft corrugated fibreboard with not less than .023 facings and .010 corrugation medium, B or C flute. This board shall have a minimum average Mullen test under normal atmospheric conditions (50 to 70% relative humidity) of 400 lbs. and immediately after 24 hours immersion in water (70° to 80°) the minimum average Mullen test shall be not less than 150 lbs. There must be no separation of the plies of the body beyond 1/4 inch from the edges of the sheet after the 24 hours immersion in water.

- Closure - The flaps of the box are to be sealed by means of a water-resistant adhesive over all areas of contact between the flaps, by metal stitching, or by a combination of these methods. The sealed box shall then be strapped with two curved, flat or round metal bands having a minimum joint or knot breaking strength of not less than 290 lbs. These straps shall be placed either at right angles (over top, bottom and sides and top, bottom and ends) or placed girthwise approximately half way between the middle and the end of the box.

Boxmakers'

- Guarantee - Manufacturers shall indicate on the box in letters not less than 3/16" in height that the box meets the above specification.

TYPE A-2 - FULL TELESCOPE FIBRE BOX FOR MEAT PRODUCTS

- Application - Packaging of meat products. Net weight 45 to 55 pounds.
- Style of Box - Full telescope construction with stitched body joints 15 x 20 x 5 - four stitches in each end corner.
- Material - Box shall be made of solid fibreboard having a minimum thickness of .100". Under normal atmospheric conditions (50 to 70% relative humidity) the minimum average Mullen test must be 750 lbs., and immediately after 24 hours immersion in water at 70° to 80°, the minimum average Mullen test must be 500 lbs. There shall be no separation of plies of the board beyond 1/4" from the edges of the sheet after 24 hours immersion in water. Box shall be paraffined on the inside.
- Strapping - Strapped with two curved, flat or round metal bands having a minimum joint breaking strength of 290 lbs., placed girthwise around the box approximately 6" from each end.

WIREBOUND WOOD BOXES

Nothing contained herein shall be construed as prohibiting the use of wirebound boxes constructed of thicker board, additional or larger wires, longer cleats, larger staples, or with closer spacing of staples, than specified.

All wirebound wood boxes shall comply with Federal Specifications NN-B-631a, except as follows: Styles 1,2 or 3 boxes or boxes with twisted or loop closures may be used. Veneer or sawed boards of the following thickness shall be used:

<u>Type</u>	<u>Total Packing Weight (Exclusive of Box)</u>	<u>Minimum Thickness of Sides, Top, Bottom, Ends and Liners</u>		
		<u>Group I Woods</u>	<u>Group II and Group III Woods</u>	<u>Group IV Woods</u>
B-0	Not exceeding 42 lbs.	1/4 inch	1/6 inch	1/7 inch
B-1	Over 42 lbs. but not exceeding 55 lbs.	1/4 inch	3/16 inch	1/6 inch
B-2	Over 55 lbs. but not exceeding 85 lbs.	1/4 inch	3/16 inch	1/6 inch
B-3	Over 85 lbs. but not exceeding 125 lbs.	5/16 inch	7/32 inch	3/16 inch
B-4	Over 200 lbs. but not exceeding 300 lbs.	Shall not be used	1/4 inch	1/4 inch

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Note 1 - The following species of Group I may be of the same thickness permitted for Group II or III Woods, for sides, top and bottom, and liners only: Cottonwood, Cypress, Magnolia, Noble Fir, White Fir and Spruce.

Note 2 - All wirebound boxes equipped with loop closures shall have each end loop stapled to the cleat or closures shall be otherwise **secured** to prevent pilferage.

Cleats - Shall be made of Groups II, III or IV Woods. Cleats shall not be less than $13/16 \times 13/16$ except B-4, which shall not be less than $13/16 \times 7/8$ or $3/4 \times 15/16$.

Binding

Wire - Types B-0, B-1 and B-2 shall not be less than No. 15 gauge; Type B-3 shall not be less than No. 14 gauge; Type B-4 shall not be less than No 13 gauge. Each binding wire shall be continuous once around the box, not over 6" apart, drawn tight and fastened by staples driven astride the wires through the thin boards and into the cleats. The point of the staple shall not project through the cleats unless clinched. Box shall be closed by looping the wires or by twisting together or otherwise joining securely the ends of each binding wire. Closures or seal used to hold together the ends of the wire shall not have less than 60% of the tensile strength of the wire.

Staples - Type B-3 shall contain not less than 4 staples in cleats 10" and under in length, not less than 6 staples in cleats 10" but over 13". On cleats longer than 13" the distance between staples shall not average more than $2-1/4$ ". Staples in cleats shall be not less than 1" No. 16 gauge and staples over intermediate wires shall be not less than $7/16$ " No. 18 gauge.

Type B-4 shall contain not less than 8 staples in any cleat for weight 200 lbs. to 250 lbs. and not less than 9 staples for weights 250 lbs. to 300 lbs. Staples in cleats shall be not less than $1-1/8$ " No. 16 gauge, and staples over intermediate wires shall be not less than $9/16$ " No. 18 gauge.

Ends - Types B-0, B-1 and B-2 shall be reinforced with edge liners not less than $1-1/8$ " wide. Type B-3 ends shall be reinforced with two battens $1-3/8$ " \times $13/16$ " adjacent to the side cleats. Ends so made shall be firmly fastened to the inside of the side cleats with either No. 16 gauge staples having legs not less than $13/16$ " long or with $7/8$ " No. 14 gauge cement-coated nails. Staples or nails shall be spaced not more than two inches apart. When the box is closed, two 7d. cement-coated nails shall be driven through each side cleat into a batten.

Type B-4 shall be reinforced with two liners $2-7/8$ " wide for ends up to 16" deep, and with three liners $2-7/8$ " wide for ends 16" and deeper. Each liner shall be fastened with two lines of well clinched staples. Two No. 14 gauge binding wires shall be stapled across the grain of each end. In addition, there shall be one horizontal batten along top edge of each end $1-3/8$ " \times $13/16$ ".

All-bound Construction - Types B-0, B-1 and B-2 ends shall have two edge liners not less than 1-1/8" wide and No. 15 gauge binding wires spaced not more than 6" from the cleats or from each other.

Type B-3 ends shall be reinforced with two liners 1-1/4" wide and No. 15 gauge binding wires stapled across the grain of each end not less than one binding wire on each end 10" and under in depth, and not less than two binding wires on ends over 10" in depth.

Closure for Heavy Meats - Types B-3 and B-4 for meats other than canned, should be size for contents to minimize voids. After wires are drawn tight for closing, box cover should be level. If necessary to close under box presses, box should be held in a rigid form under the press. Type B-4 to be strapped with one lengthwise strap in the center, top, and bottom, and two ends No. 13 gauge grip-lock or equal, or 5/8" x .023" flat straps.

Boxes shall be printed with the name and address of the manufacturer and a guarantee of compliance with this specification.

NAILED WOOD BOXES

Boxes shall be made of new materials of good commercial quality. All boxes shall be made of seasoned lumber having a moisture content not to exceed 18%. The pieces shall show no defects that materially weaken them, expose the contents of the box to damage or interfere with nailing. No knot or knot hole shall have a diameter exceeding one third the width of the piece. Surfaces of box parts shall be sufficiently smooth to permit legible stenciling and shall not be splintery. Boxes for weights not exceeding 75 lbs. shall be Style 1, Federal Specification MN-B-621a. Boxes for weights exceeding 75 lbs. shall be Style 4 or Style 5 with triangular cleats for round or oval cans and Style 4 for square or oblong cans. Boxes for weights not to exceed 300 lbs. or less than 200 lbs. shall be Style 4. Boxes for weights exceeding 500 lbs. but not to exceed 650 lbs. shall be Style 2 or 2-1/2.

Type	Total Packed Weight (Exclusive of Box)	Minimum Finished Thickness of Ends	Minimum Finished Thickness of Sides, Tops and Bottoms	
		Group I, II or III Woods	Group I or II Woods	Group III or IV Woods
C-1	Not exceeding 55 lbs.	5/8 inch	9/32 inch	1/4 inch
C-2	Over 55 lbs. but not exceeding 75 lbs.	3/4 inch	11/32 inch	5/16 inch
C-3	Over 75 lbs. but not exceeding 125 lbs.	3/4 inch	11/32 inch	5/16 inch
C-4	Over 200 lbs. but not exceeding 300 lbs.	5/8 inch	5/8 inch	1/2 inch
C-5	Over 500 lbs. but not exceeding 650 lbs.	5/8 inch	5/8 inch	1/2 inch

Each side, top and bottom for Types C-1, C-2 and C-3 shall be nailed to each end piece with not less than four five-penny cement-coated nails spaced not more than three inches apart. 7-penny cement-coated nails shall be used for Types C-4 and C-5, spaced not more than 2-1/4 inches apart for nailing into ends and cleats 6 to 8 inches apart for sides, bottoms, and tops. The nailed boxes shall be reinforced by two curved flat or round steel straps, each having a joint or knot breaking strength of not less than 290 lbs. applied over sides, top and bottom, approximately 1/6 the distance from each end of the box.

BARREL SPECIFICATIONS

New or used hardwood tierces, barrels or kegs manufactured of white oak, red oak, fir, ash or gum (red or sweet) shall be constructed according to Grade Rules and Specifications of the Associated Cooperage Industries of America, Inc. (Used tierces or barrels shall be recoopered and conditioned so that they will be considered to be sound in comparison with a new barrel.)

Barrels will be lined in the following manner, depending upon the product for which they are intended:

- A - Unlined
- B - Paraffined
- C - Silicate
- D - Double Silicate
- E - Glue